

LETTER TO THE EDITOR

Ipsilateral herpes zoster after the first dose of BNT162b2 mRNA COVID-19 vaccine

Editor

As vaccination campaign against SARS-CoV-2 is ongoing worldwide, dermatologists are witnessing an increasing number of cutaneous adverse events. Delayed hypersensitivity reactions at the site of injections with mRNA-1273 (Moderna)¹ and BNT162b2 (Pfizer-BioNtech) vaccines² are now known as 'COVID-arms'. Besides, cases of Rowell's syndrome 24 h after vaccination³ and persistent exanthema have been recently reported.⁴ Bostan and Yalici-Armagan⁵ described the case of a 78-year-old man with thoracic herpes zoster (HZ) 5 days after COVID-19 vaccination. We wish to report an additional case from Finland.

A 44-year-old healthcare provider received his first injection of BNT162b2 mRNA COVID-19 vaccine on 2nd February. He had a history of dyslipidemia and active smoking. He presented pain and local redness after vaccination, as widely reported.² However, after a week, pain had not subsided and extended to the neck and the left hand. It also changed to a neuropathic pain. He also developed intense tiredness and noticed a rash on the left upper limb. Upon full examination, he displayed an herpetiform vesicular and erythematous rash on the left upper back (Fig. 1a) and lateral side

and inner side of the left arm (Fig. 1b) that followed approximately C5–C6 dermatomes. A diagnosis of HZ was made. He still presented the local reaction at the site of injection (Fig. 1c). He received oral valaciclovir thrice a day for 2 weeks. Evolution was favourable, although postzoster neuropathic pain lasted for a month. He had mild varicella during childhood and acknowledged that the very same period was stressful, but denied any other immunosuppressive factor. He received his second injection of BNT162b2 vaccine on 21st April without side effect.

In the multinational placebo-controlled study that included 43 548 participants for BNT162b2 vaccination,⁶ 27%, 21% and 1% of the patients in the vaccination group reported an adverse event, a related event and severe event, respectively. However, HZ was not mentioned. At the time of writing this manuscript, we had found no report of HZ after mRNA-1273 vaccine.

Arguments that support in our case a link between SARS-CoV-2 vaccination and HZ include the following: (i) short delay of onset after vaccination; (ii) eruption on the same side as the vaccinated arm; (iii) a previous case of HZ after SARS-CoV-2 vaccination⁵; (iv) numerous cases of HZ have been described in critically-ill or seemingly immunocompetent COVID-19 patients^{7–9}; and (v) cases of herpes viruses reactivations reported after various vaccinations.¹⁰ HZ in COVID-19 patients may be related to physical and emotional stress associated with acute illness and also to COVID-19-induced lymphopenia and functional impairment of T cells.^{8,9} It is likely that immune dysregulation

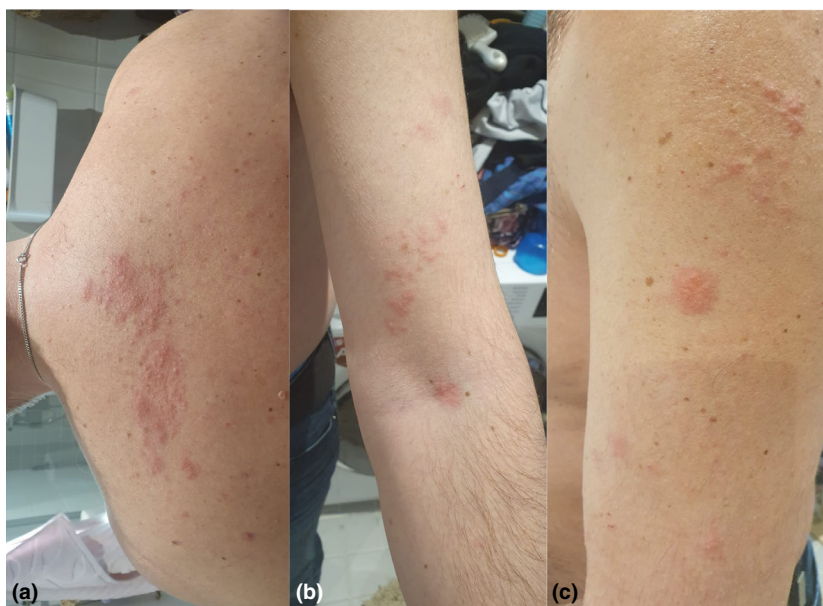


Figure 1 Vesicles and erythematous patches in clusters evocative of a herpes virus infection. The lateralized distribution on the left side of the upper back (a) and arm (b) favours herpes zoster on C5–C6 dermatomes. Local hypersensitivity reaction after vaccination on the left upper arm ('COVID-arm') is still notable (c).

created by the vaccine played a role in the reactivation of latent Varicella Zoster Virus infection in our case as in the previous on,⁵ although we cannot rule out a fortuitous event.

Acknowledgements

The patient in this manuscript has given written informed consent to publication of their case details

Funding sources

None.

Conflict of interest

None.

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DOI: 10.1111/jdv.17422